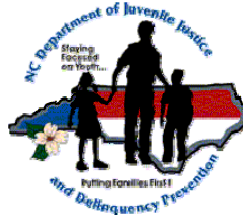# North Carolina Department of Juvenile Justice and Delinquency Prevention

Agency IT Plans

2007 – 2009 Biennium

September 2006

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Introduction

This Executive Summary provides an overview of the Department of Juvenile Justice and Delinquency Prevention (DJJDP) Strategic Technology Plan for 2007–2009. The Department of Juvenile Justice and Delinquency Prevention has developed this plan in order to describe how it intends to leverage technology for the youth, families, and communities members it serves while achieving its business vision, mission, goals, and objectives. The plan was developed by DJJDP's CIO section and reviewed by Secretary George L. Sweat and his management team.

Vision, Mission, and Goals

The Department of Juvenile Justice and Delinquency Prevention has developed this Strategic Technology Plan based on a shared vision and mission for technology and its application to further the Department's overall vision, mission, and goals.

DJJDP Vision

A seamless, comprehensive, juvenile justice system which provides the most effective services to youth and their families at the right time in the most appropriate settings.

DJJDP Mission

To promote public safety and juvenile delinquency prevention, intervention, and treatment through the operation of a seamless, comprehensive, juvenile justice system.

DJJDP Goals

- To promote public safety as the cornerstone of North Carolina's juvenile justice system.

- To promote juvenile delinquency prevention, intervention, and treatment at the state and community levels so that juvenile crime and delinquency are reduced.

- To establish and maintain a seamless, comprehensive juvenile justice system.

Information Technology Mission

The mission of the Information Technology (IT) section is to assist in providing effective services to youth and their families through enhancing NC-JOIN and other applications that manage information for staff and management. These business tools establish and support a seamless service delivery system for delinquency prevention, intervention, and treatment service programs both in the community and in facilities operated by the Department. They support DJJDP's vision, mission, and goals by providing help desk services, technical and application support, research oversight, responses to internal and external data requests, network services and security initiatives.

Departmental/Agency Strategic Business Initiatives and Major Business Requirements

Business Objectives

This section presents an overview of the business objectives DJJDP will complete, or make major progress on, over the next three years. These objectives have evolved from prior plans as well as strategies identified at the data summit in July 2006. The Department's first strategic priority is the development of comprehensive service planning for the youth it serves. This priority involves development of therapeutic environments, characterized by a new model of care, which require enhancement of the staff development and accountability system (SDAS). The SDAS system tracks training information vital to staff assignment as a result of the Youth Development Center (YDC) replacement program. This program was designed to address the language identified in House Bill 1804, Article 12.

Below are additional strategic priorities DJJDP's IT section will focus on during this three-year planning cycle:

- Implement enhancements and ad-hoc reporting capabilities to the NC-JOIN system in order to achieve the Service Planning strategic priority.

- Continue enhancements to the NC-JOIN application to meet the initiatives set by DJJDP's end-users and executive management team.

- Combine the SDAS, policy, and staff development systems to allow users access to similar data in one central location. Include an enhancement to assist HR in developing the Departmental organizational chart tied to the position numbers.

- Maintain data quality validation to assist chief court counselors and facility directors in managing the quality of data entered by their staff. Provide guidance to our staff and support for our users through documentation such as policies, processes, procedures, and training materials.

- Support normal software release upgrades and aging equipment through maintenance and replacement activities.

- Evaluate applications developed and supported by DJJDP to ensure we are gaining economies of scale regarding usability, maintenance, and support.

- Evaluate IT security standards established by the state CIO for compliance.

- Develop a data warehouse architecture allowing end-users the ability to query and generate a single report from multiple data sources.

- Develop a Transportation Management System (TMS) to schedule and track youth served. The TMS application will track the location of youth and the agency teams providing the transportation.

Requirements for Transitioning IT Activities/Resources

Current Projects

This section presents an overview of current projects that DJJDP is currently completing or implementing.

- Upgrading the NC-JOIN application with information addressing vital issues such as suicide, risk assessments, and electronic monitoring so that they are tracked in the application portfolio management tool.

- Enhancing the Staff Development and Accountability System (SDAS).

- Enhancing the Serious Incident Reporting and Investigation System (SIRIS).

- Consolidating the policy, basic and in-service training, and SDAS databases.

- Implementing the ability to allow end-users to create ad-hoc reporting capabilities.

- Developing a data warehouse architecture allowing end-users the ability to query and generate a single report from multiple data sources.

- Consolidating the Juvenile Crime Prevention Council and Interstate Compact for Juveniles information into NC-JOIN.

- Implementing new servers and operating systems in support of new applications.

- Reassessing the implementation of NC-JOIN phase 4 (data on youths committed to DJJDP).

- Researching and demonstrating a Content Management System (CMS).

- Writing requirements for an Intranet. This project will include working with the Communications Office to enhance the HR web page to support centralized functions (such as FAQs and email questions). It also includes providing support for on-line HR forms for benefits and development of web-based training programs.

- Consolidating like applications.

Applications

The table below provides a snapshot of applications and associated functions identified in the DJJDP work plan.

Applications	Maintain	Enhance	Replace	Retire	New Product	Consolidate
NC JOIN	X	X				
Suicide (NC JOIN)		X				
Risk Assessments (NC JOIN)					X	
Electronic Monitoring (NC JOIN)		X				
SDAS		X				X
SIRIS		X				
DJJDP Policy	X					
Database						X
CMS			X			
Data Warehouse					X	
NC JOIN Policy	X					
Server OS	X					
Light Year	X					
Heat	X					
JCPC Programs	X					X
VB Apps			X			
HIDS (Appliances)					X	

Infrastructure Assets

The table below provides an estimate of assets DJJDP is planning to purchase over the next two years.

Assets	Upgrade	Addition	Replacement	New Product	Cost	Benefit/Status
Servers		4	3		$50,000	Meet Security Needs.
Laptops			400		TBD	Based on a 3-year replacement cycle.
Desktops			800		TBD	Based on a 3-year replacement cycle.
Monitors			800		TBD	Based on a 5-year replacement cycle.
Printers			200		TBD	Based on a 5-year replacement cycle.
Estimated Total Cost					$1,050,000	Replace equipment over a two year period.
HIDS Appliance					$30,000	Change management and security intrusion.

Operations/IT Management

DJJDP is looking for a content management system (CMS) to manage policies, processes, and procedural documentation as well as web content. The CMS system will provide security against loss of data due to hackers, computer crashes, and accidental file deletions.

The application development group will began evaluating various database manufacturers. The goal is to obtain a database system that can help DJJDP lower information technology infrastructure and management costs while continuing to enhance functionality. DJJDP′s objective is to gain additional features, functionality, and innovation at a cost lower than the current database product.

DJJDP′s IT section will create policies, processes and procedures used to manage incident, change, and configuration management. These documents will provide a framework for managing activities. DJJDP′s IT section will also create training and end-user documentation and began reviewing knowledge base functionality.

Collaborating with other agencies regarding initiatives beneficial to both agencies is a worthwhile endeavor]. For example, working with the Administrative Office of the Court (AOC) to determine if wireless access points can be installed would allow court counselors to input case management information into NC-JOIN while waiting for their court cases to be heard.

Human Resources

In order to carry out the plan as described, three additional positions need to be added to DJJDP′s IT section. These positions are a Systems Administrator, End-User Application Support Analyst, and Database Administrator.

Systems Administrator

The system administrator will work with DJJDP′s application group and ITS network infrastructure group to identify viabilities. The technical services group will create and execute an implementation plan to correct all items identified as security viabilities.

This staff member will also be responsible for supporting the additional servers added to DJJDP′s assets. She/he will also monitor the network for security anomalies. This staff member must have experience in SSL and host intrusion detection system (HIDS). This staff member will work towards not only meeting the ITS objective but also meeting DJJDP′s objective to protect the information of the youth and families it serves.

Information from our in-house applications which ends up in the wrong hands could be devastating to DJJDP staff members, youth, and families. This impact could cause the youth served by DJJDP and their family member(s) to disengage in treatment vital to their long term success. Additionally, DJJDP's employees could experience identity theft.

End-User Application Support Analyst

The end-user application support person will support the SDAS, JCPC, SIRIS, NC-JOIN, and other in-house applications. The end-user application staff person will work proactively with the NC-JOIN end-users to resolve data quality issues. This staff member will also be available to respond to ad-hoc report request and NC-JOIN data fixes.

Database Administrator

The DBA will combine data from stand alone database applications such as: Policy and Basic Training into SDAS. ICJ and JCPC into NC-JOIN and other databases could be combined to meet the future needs driven by the mandate identified in House Bill 1804, Article 12.

The DBA would also be responsible for creating a data warehouse environment. The environment will make it easier to query and generate a single report from multiple data sources. For example, the user could capture data stored in NC-JOIN, SDAS, and policy databases on one report.

Training

DJJDP purchased thirty seats of online training courses from MindLeaders. The DJJDP IT technical staff members will focus on the class groups below:

Number of Staff	Class Group	# of Classes	Benefits
6	Professional Development	6	Enhancing areas of Project Management and leadership.
2	Web Development	10	Learning new tools to increase programmer productivity.
3	Java Development and Certification	20	Java is our main programming language, therefore, we need experts in this field who can keep abreast of new programming trends and techniques and provide for certification advancement.
2	Other Business Topics	6	Project management and budgeting.
5	Windows XP Professional	1	Generating ad-hoc reporting.
10	Windows XP Application and System Support	2	Supporting remote end-users.
3	Windows Certification	10	Building and configuring Intel based systems.
2	Data Warehousing Series	6	Building a data warehouse environment that will extend reporting capabilities to DJJDP's end-user community.
3	DB2 University Data Series	6	Learning new features to increase DBA productivity.
4	Windows 2003 Server Series	4	Learning new server design and security enhancements to increase operating system performance.
4	SQL Series	10	Learning SQL in support of users requesting research data and ad-hoc reports.
4	Other Technical Topics	10	Database and server knowledge.

IT Specific Economic-Driven Requirements or Opportunities

The IT section will work with the executive management team and end-users to ensure IT functions align with business objectives and to clarify how technology can help the

business best assist staff as they serve youth, families, and communities. Specifically, this means initiatives to:

- Consolidate existing applications into NC-JOIN to improve business processes and reduce the complexity of maintaining technically obsolete applications.

- Establish a Data Warehouse and Reporting system to provide trend analysis and measurement tools for meeting business objectives.

- Establish a content management system (CMS) to manage policies, processes, and procedural documentation as well as web content. The CMS system will provide security against loss of data due to hackers, computer crashes, and accidental file deletions.

- Implement a pilot project to determine the feasibility of wireless NC-JOIN access. The wireless pilot program will provide the participants with a laptop and wireless data service.

- Hiring an End-User Application Support position. This position will work with NC-JOIN users to ensure their data input meets the policy and procedures designed to validate data quality.

Additionally, the IT section will began reviewing knowledge base functionality and will create training and end-user documentation as well as policies, processes, and procedures to manage incident, change, and configuration management. These documents will provide a framework for managing IT activities.

IT Initiatives Developed from and Aligning with Plan Drivers

Initiative 1 –Implement a Data Quality Focus

Name/Title: Betty Nixon, CIO

Summary Description:

This initiative is comprised of two main efforts. The first involves consolidation of various database applications into NC-JOIN. The second effort involves hiring an end-user application support position whose primary focus will be to provide assistance to end-users who encounter issues with their NC-JOIN data entry. This person will work with the end-users to ensure their data entry procedure is in line with the policies and procedures used to create the NC-JOIN logic.

Major Objectives and Benefits:

- Increase quality of data entered into NC-JOIN.
- Reduce the duplication of youth served by DJJDP and program data.
- Provide a centralized data source.

Timeframe:

- July 2007 – June 2008
- Contingent on the availability of resources and funds.

Relationship to Other Agencies:

- Important program analysis capabilities would be available to non-profit agencies receiving Juvenile Crime Prevention Council funds and county governments seeking to reduce the level of delinquency within their counties.

Order-of-Magnitude Costs:

- A new End-User Application Support position would be required.
- Developer time and resources $50,000

Initiative 2 – Data Warehouse and Reporting

Name/Title: Betty Nixon, CIO

Summary Description:

Over the past four years, DJJDP has had a steady flow of important juvenile data mainly from its statewide NC-JOIN system. What makes our business successful and why is critical to driving performance. With an established statewide NC-JOIN transaction system, the data warehouse structure and reporting tools will provide sufficient means to analyze this important data and improve the measurement of DJJDP business objectives.

Major Objectives and Benefits:

- Improves interactive understanding of business-critical information across all agency departments.
- Provides an interactive, dynamic intelligence solution for different classes of users, from simple to complex, including content viewers, analysts and developers.
- Provides the ability to respond quickly to internal and external data/report requests.
- Rapid deployment and enterprise-class scalability.
- Ease of use.

Timeframe:

- July 2007 – June 2009
- Contingent on the availability of funds and resources.

Relationship to Other Agencies:

- Important juvenile trends and analysis would be available to other state agencies and institutions.

Order-of-Magnitude Costs:

- Data warehouse software can cost anywhere from $50,000 to $500,000. DJJDP would explore the SAS Enterprise services currently under development with ITS.

- A new Database Administrator position would be required.

Initiative 3 – Content Management System (CMS)

Name/Title: Betty Nixon, CIO

Summary Description:

DJJDP is looking to evaluate a content management system (CMS) to manage policies, training, requirements, end-user, processes, procedural documentation, and web content. The CMS system will provide security against loss of data due to hackers, computer crashes, and accidental file deletions.

Major Objectives and Benefits:

- Allows a person with no training in Hypertext Markup Language (HTML) programming the ability to create, modify, and remove content from a website.
- Provides the ability to allow multiple people input to one document centrally located. The system will keep track of changes and allow the ability to reverse a change.
- Provides the ability to specify permission to a document.

Timeframe:

- January 2007 – March 2007
- Contingent on the availability of resources and funds.

Relationship to Other Agencies:

- Provides the ability to create multi-agency documentation.

Order-of-Magnitude Costs:

- This is a new product and training will be required. There may be some unknown implementation costs.
- Additional software components may be required.
- CMS software can cost anywhere from $30,000 to $100,000. DJJDP is currently evaluating several software packages.
- A new System Administrator position would be required.

Initiative 4 – Pilot for Wireless NC-JOIN Access

Name/Title: Betty Nixon, CIO

Summary Description:

Although many DJJDP staff are located in an office environment, many also have duties that take them out of the regular office environment and away from a desktop computer. For example, juvenile court counselors spend a significant amount of time in court waiting for a hearing before the judge. Court counselors also make home visits which they document in NC-JOIN. In both cases, however, they have to wait to return to their offices to document information they could be accomplishing either in the courtroom or at the home. Any documentation needed to be entered into NC-JOIN or viewed in NC-JOIN could be available for such instances as well as meetings with representatives from other agencies serving the same juvenile.

Major Objectives and Benefits:

- Allows the court counselors to use their time more efficiently.
- Provides flexible work environment.
- Increases productivity.

Timeframe:

- October 2006 – June 2008
- Contingent on the availability of funds and resources.

Relationship to Other Agencies:

- Allows the court counselors the ability to document their cases in NC-JOIN while out of the office.

Order-of-Magnitude Costs:

- Wireless equipment will ranges from $1500 to $2,500 each. Total of six participates.
- Wireless data access will range from $30 to $50 per month for each participate.
- Initially, no new staff is required. On going support will require an End-User Application Support Analyst